



# CryptoCard

Ellek Linton

International Business Plan Event

Bitcoin Debit Card: *CryptoCard*

Corner Canyon DECA

Corner Canyon High School

12943 South 700 East, Draper, UT 84020

February 18, 2015

## **Table of Contents**

<b>I. Executive Summary .....</b>	<b>1</b>
<b>II. Introduction .....</b>	<b>2</b>
<b>A. What is CryptoCard? .....</b>	<b>2</b>
Where would CryptoCard be based? .....	2
What are some problems with using Hong Kong as a bank provider? .....	3
<b>B. What is Bitcoin? .....</b>	<b>4</b>
Problems With Using Bitcoin .....	6
Bitcoin Problems Solved By CryptoCard .....	7
<b>III. Analysis Of The International Business Situation .....</b>	<b>8</b>
<b>A. Economic, Political, and Legal Analysis .....</b>	<b>8</b>
1. Description Of The Country's Economic System (Hong Kong) .....	8
2. How is CryptoCard affected by Hong Kong's style of government? .....	10
3. Description of the laws affecting the product (CryptoCard) .....	10
<b>B. Trade Area and Cultural Analysis .....</b>	<b>11</b>
1. Geographic and Demographic Advantages and Disadvantages of Hong Kong's Culture. ....	11
2. Market Segment Analysis of CryptoCard .....	12
3. Analysis of Potential Business Location (Hong Kong) .....	12
<b>IV. Planned Operation of The Proposed Product (CryptoCard) .....</b>	<b>13</b>
<b>A. Proposed Type of Company / Organization .....</b>	<b>13</b>
<b>B. Proposed Product (CryptoCard) .....</b>	<b>14</b>
1. Details of The Product (CryptoCard) .....	14
2. How CryptoCard Will Be Transported from Hong Kong To International Customers .....	19
3. Documentation .....	19
<b>C. Proposed Strategies .....</b>	<b>20</b>
1. Proposed Pricing Policies .....	20
2. Proposed Promotional Program .....	22
<b>V. Planned Financing .....</b>	<b>23</b>
1. Projected Income And Expenses .....	23
<b>A. Projected Income Statements For The First Year's Operation .....</b>	<b>26</b>
<b>B. Proposed Balance Sheet For The End of The Year .....</b>	<b>26</b>
1. Distribution of Net Profit .....	26
<b>C. Planned Growth of Cryptocard .....</b>	<b>26</b>
<b>VI. Bibliography / Sources Used .....</b>	<b>28</b>

## I. Executive Summary

CryptoCard is a debit card for use with Bitcoin. CryptoCard has two primary goals: anonymity and simplicity/ease-of-use. With these two end goals, the user will feel secure, and also have a positive experience when using CryptoCard. One of the largest problems among Bitcoin users is that Bitcoin is complicated and complex to use. This is a result of a poor user interface design. CryptoCard aims to be the gap in design and functionality with Bitcoin by crossing the two in a hybrid, debit card-modeled product.

Bitcoin is a decentralized, peer-to-peer based alternative form of payment. The Bitcoin network is hosted collectively by all of the computers that use it, meaning that Bitcoin can never be taken down. Since it is decentralized, it is not controlled or

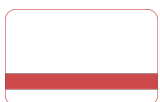
CryptoCard will be based in Hong Kong. Hong Kong is renowned at having one of the strongest world economies, and it also supports decentralized ideas, such as Bitcoin. According to Heritage.org, Hong Kong has had the freest economy among all countries, Hong Kong also was among the top world economies overall. Heritage gave Hong Kong's economy a 90.1 / 100, which ranks it as the overall most suitable economy worldwide. Another major benefit of being legally based in Hong Kong is that Hong Kong's economy is based on a free-market approach. This strictly limits the control that the Hong Kong government has over its business, and benefits CryptoCard greatly.

CryptoCard will operate similar to how debit cards function. It will be based on an existing payment infrastructure (e.g. Visa, MasterCard, etc.). This allows CryptoCard's market integration to be seamless. By partnering with a large company with an existing infrastructure, CryptoCard will be compatible with the majority of retailers who accept debit and credit cards, online or in-store.

Another advantage of using this implementation method is the user experience being dramatically simplified. Since the majority of debit/credit card users are aware of how the process works, there will not need to be any complex documentation to explain the process of CryptoCard, and keep the user experience extremely simple.

Financially, CryptoCard needs at least 2,090 customers for the first two years, and at least 1,000 customers for each year subsequent. This allows CryptoCard to pay off *all* initial expenses, including platform development and security, 1-3 years post-launch, dependent upon how many customers CryptoCard has.

Since anonymity is one of CryptoCard's two primary goals, it is discernibly a very important concept to relay. That is why Bitcoin is being used as a medium to pay for transactions. Bitcoin is pseudo-anonymous. This means that every Bitcoin transaction is tied and linked to a Bitcoin address. However, even if a Bitcoin address is known for a given transaction, there is nearly no way to trace the Bitcoin address to a person. This allows Bitcoin to have total, and 100% transparency, while still preserving anonymity.



CryptoCard

## II. Introduction

### What is CryptoCard?

CryptoCard is a Bitcoin debit card. Currently, spending Bitcoin is a hassle, and far too complex. If one wants to spend Bitcoin, he/she must first get a long, complicated address of the recipient (something like *1HB5XMLmzFVj8ALj6m-fBsbifRoD4miY36v*), and then specify the exact amount he/she wishes to send, in Bitcoin (BTC), which would be something like 0.17736052 BTC. After this, the recipient must convert the Bitcoin to a fiat currency (e.g. USD, EUR), which will then be deposited into his/her personal bank account, in order to spend the Bitcoin.

Not only does depositing converted money directly into a bank account obliterate all anonymity, it is extremely complicated. CryptoCard solves the complexity of spending/converting BTC by using a computerized, automatic system that handles all of this for the user. The specifics of how the computerized process works are detailed later in this report.

### Where would CryptoCard be based?

CryptoCard would be primarily based in Hong Kong, but would use the English language. It would be based in Hong Kong because Hong Kong is one of the few remaining 1<sup>st</sup> world countries that still offer 100% anonymous banking<sup>i</sup>. CryptoCard needs to have a bank-partner in order to convert BTC to USD. There would be one large bank account for the CryptoCard company, and a sub-account for each of CryptoCard's customers. This would allow CryptoCard to manage all of its client's funds, and preserve anonymity for each user.



CryptoCard

Another advantage of using Hong Kong for banking is the fact that they are one of the few remaining countries without a legal obligation to report the identity of its clientele to the government. Essentially, it is one of the only places where it is 100% legal to hold an anonymous bank account<sup>ii</sup>. On top of this, Hong Kong is known for having a very open economy, nearly a total free market.

### What are some problems with using Hong Kong as a bank provider?

One of the most obvious challenges with using Hong Kong as the provider is the simple fact that it is on the other side of the world from the United States. This will make it difficult to regularly contact customers, who will be based primarily in the United States and Europe. Once the initial computerized system is in place, close communication with the bank will not be necessary, but it *will* be simplified via the computer system.

Another challenge with using Hong Kong as a bank provider, and having operations in the United States, is that the United States Government will constantly be requesting data from CryptoCard for bank account usage statistics. CryptoCard will keep *no* data logs, so even if the U.S. government demands that CryptoCard surrender data, CryptoCard physically does not have any data to surrender. CryptoCard does not actually have any data to surrender in the first place, and keeps everything is 100% anonymous.

The only other problem would be the difficulty of converting Hong Kong Dollars (HKD) to United States Dollars (USD), or whatever currency the client prefers. This is solved by using the HitBTC.com API, which allows for easy and instant conversion between fiat currencies (USD, EUR,



CryptoCard

HKD) to cryptocurrencies (Bitcoin, Litecoin). This eliminates the need for an intermediary when converting currency, sparing that fee from incurring.

## What is Bitcoin?

One of the key elements of CryptoCard, to purport anonymity, is that it is going to be funded via Bitcoin. Bitcoin is a peer-to-peer<sup>iii</sup> based payment system. It is decentralized, meaning that it is not controlled by a central organization, such as a government or bank. Bitcoin is not linked to any specific server; it is hosted collectively by *all* of the computers on the Bitcoin network. Bitcoin is also open-source, meaning that the source code is available to view by the public.

The concept of having a decentralized currency, such as Bitcoin, has many benefits. With Bitcoin, every transaction is nearly instant. Traditionally, when one wants to send money internationally, they must submit a bank wire, wait for approval, and then wait approximately 48 hours for the transfer to complete. With Bitcoin, anyone can send money to anyone in the world. To do this, all one needs to do is get the recipient's Bitcoin address, input the amount, and click "send". The user then has to wait approximately 10 minutes<sup>1</sup> for the transaction to be verified, immediately after it is verified, the recipient has the Bitcoin. Bitcoin is also known for being

---

<sup>1</sup> Bitcoin transactions, on average, take between 5 and 10 minutes, depending on the current health of the Bitcoin Network.

<sup>2</sup> The Wall Street crisis/bank crisis of 2008 put the United States in an economic

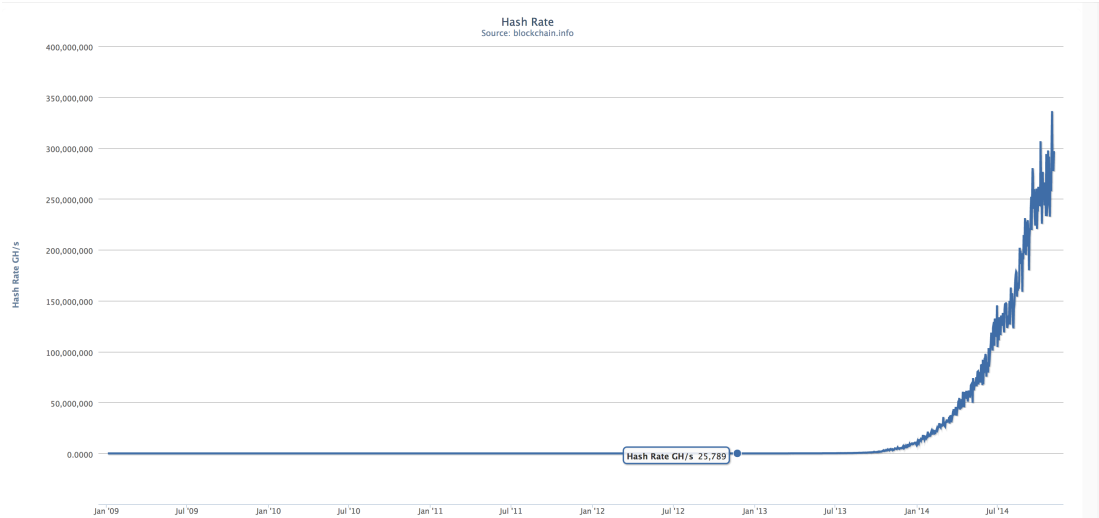
100% transparent. Anyone with an Internet connection can view *all* of the details for any Bitcoin transaction, but not any personal information.

Transparency is very important. Transparency creates a method of verifying that a potential Bitcoin user is legitimate, while preserving privacy. This is very important in the Bitcoin world because scam rates are high within the Bitcoin community, due to it being truly anonymous.

Another major benefit of using Bitcoin is zero to low processing fees. A wire transfer typically cost between \$20-\$25<sup>iv</sup>. A Bitcoin transaction only costs between \$0.20 and \$0.25. This is 100x lower than the average cost of a bank transfer Bitcoin fees pay the network of computers that run Bitcoin. These computers are known as miners.

Miners are essentially the underlying servers that control the Bitcoin network. Without miners, Bitcoin is nonexistent. There is *no* central authority that controls Bitcoin, so miners are *necessary* to uphold the network. Miners are truly the foundation of the Bitcoin network. Without miners, Bitcoin would not function, and by definition, it would not even exist. Miners work together in what is called “pools” to decipher algorithms put out by the Bitcoin network, to verify a transaction. The *network hashrate* is a sum of the power of the entire Bitcoin mining network, and it is measured in Hashes per second (HPS). In this graph from blockchain.info<sup>v</sup>, it can be seen that the hashrate of the Bitcoin network has been exponentially increasing since November of 2013. The Bitcoin network continues to rise rapidly, since November 2013.





## Problems With Using Bitcoin

Although Bitcoin may seem perfect, there are actually a few downsides to using Bitcoin. One of the most apparent of these problems, and really the only true problem with using Bitcoin is the fact that it *is* decentralized. This causes the value of Bitcoin to fluctuate severely, because it is not being regulated or controlled by a governmental organization.

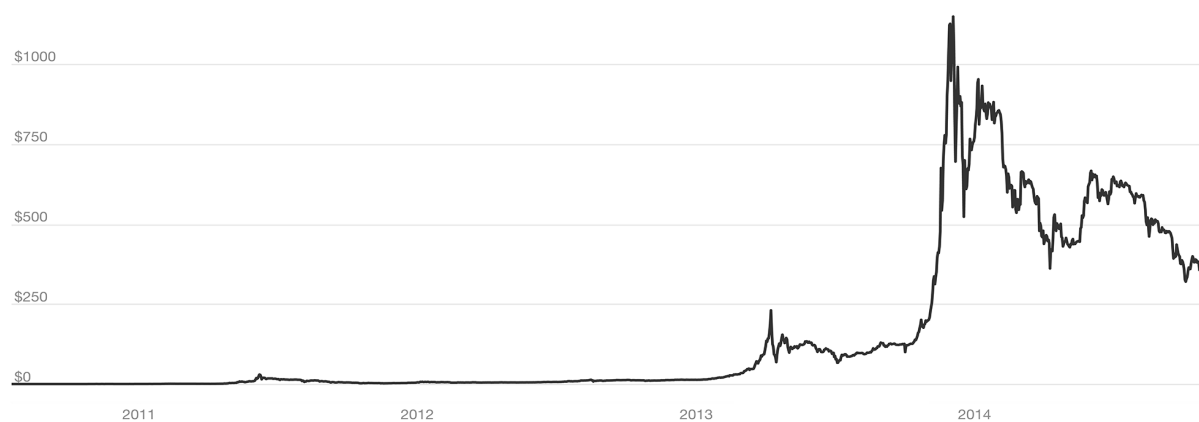


Chart from [coindesk.com/price](http://coindesk.com/price)

As seen above, the value of Bitcoin has been plummeting almost non-stop since the



CryptoCard



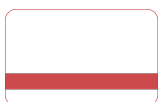
November 2013 bubble. This creates instability, and a lack of trust in those interested in long-term investments in Bitcoin.

Another problem with using Bitcoin is that there is no insurance when using a transaction, making transactions risky, and at times, potentially dangerous. This is dangerous because when someone sends money via Bitcoin, it is gone from him or her forever; so if someone sends it to the wrong address, the Bitcoin now no longer exists. On top of that, if I send the wrong amount of Bitcoin, there is no way to get it back. None of these primary problems exist within the CryptoCard platform.

### Bitcoin Problems Solved By CryptoCard

The first problem with Bitcoin is severe exchange rate fluctuation. CryptoCard flawlessly solves this. When one wants to deposit money to their CryptoCard, they simply send Bitcoin to a user-specific Bitcoin address, and it is immediately converted to their fiat currency of choice (USD, EUR, etc.). This means that if someone deposits 0.5 Bitcoin (BTC) to an account when the BTC to USD value is \$600, they will get a \$600 credit to their account at the exchange rate of \$600. So even if the exchange rate drops to \$400 the next week, they will still have \$600 in their account.

When using Bitcoin traditionally, the opposite would occur. If I obtained 1.0 Bitcoin, and the exchange rate at the time of me getting it was \$650, I would have \$650 worth of Bitcoin initially. However, if the exchange rate were to fall to \$400 the next month, I would now only have \$400 worth of Bitcoin, despite the fact that I paid for \$650 worth of Bitcoin. So, in essence,



CryptoCard

I would have lost \$250, and there is nothing I can do to prevent it from happening. This is precisely what happened to tens of thousands of Bitcoin users from March 2013 to April 2013. The March-April crash of 2013 sparked another long-term downfall, eventually bringing the Bitcoin price to \$200 USD. With CryptoCard, these problems simply do not exist because CryptoCard immediately converts Bitcoin to a fiat currency, like USD or EUR.

### III. Analysis Of The International Business Situation

#### *A. Economic, Political, and Legal Analysis*

##### **1. Description Of The Country's Economic System (Hong Kong)**

Hong Kong's economy is a fantastic economy. In fact, Hong Kong's economy is considered to be the most open economy, while being extremely stable<sup>vi</sup>. According to Heritage.org, Hong Kong has been rated the world's freest economy for 20 consecutive years. It is also the top rated economy in the Heritage index. Overall, it has a score of 90.1 / 100. This number is based on rates of property rights, fiscal freedom from government, regulatory efficiency, relative quality of open market, and many more factors. This means that Hong Kong's economy is based on an open market, free from government control. These two factors alone make it the perfect location to host CryptoCard's banking. As of Heritage's 2014 index, Hong Kong's Heritage score rose overall 1.6 from 2013 to 2014. Not only does this set the record for improvement on a yearly basis, but also it shows that Hong Kong continues to innovate and improve its economy, despite already having the best economy worldwide.



CryptoCard

On top of having all of the benefits of a free market, Hong Kong's economy is also extremely stable. According to the *South China Morning Post*<sup>vii</sup>, Hong Kong's economy and currency is able to not only withstand temporary barriers (such as the protests that rattled 2014), but also is able to stay stable in a problematic situation. This is something that even more developed countries, such as the United States have not even been able to accomplish<sup>2</sup>. This proves that not only is Hong Kong's currency and economy stable, but also it is able to stand strong against significant threats, which is precisely what the CryptoCard product needs.

## 2. Description Of The Country's Governmental Structure and Stability, How The Government Controls Trade and Private Business

As previously stated, Hong Kong has a very open economy. Its economy is closer to a 100% free market than any other country in the entire world, according to Heritage.org. This simply means that Hong Kong's government has minimal involvement in regulating trade, and only affects trade when absolutely necessary.

Although Hong Kong is technically part of The People's Republic of China (PRC), it governs itself when it comes to economic rights. A 1,200 member Election Committee elected Hong Kong's economic department, making it a democratic form of government. This means that the market is based on what the people want. Hong Kong has a very small government, light taxes,

---

<sup>2</sup> The Wall Street crisis/bank crisis of 2008 put the United States in an economic downfall.



and light regulation, which naturally create a very prosperous economy<sup>viii</sup>, which has been acknowledged by the Heritage 2014 Index. Hong Kong's government is a *very* stable government, which prefers to have minimal involvement whenever possible.

## 2. How is CryptoCard affected by Hong Kong's style of government?

The government that exists within Hong Kong is nearly 100% ideal to what CryptoCard prefers. The number 1 goal of CryptoCard is to be 100% anonymous. A product with this quality can only exist in an economic environment that is based on the free market approach. This gives more control to users, and allows them to fully control their finances, in whatever manner they choose. Thus, Hong Kong is a perfect match to CryptoCard's needs.

On top of needing a free market, CryptoCard needs stability, especially in economic terms. Hong Kong has virtually no debt<sup>ix</sup>. It's Gross Domestic Product is approximately \$550 Billion HK dollars per year, or \$71 billion USD per year. According to Hong Kong's official government website, the country only has \$1.5 million HK dollars in debt. This converts to just under \$200,000 United States Dollars in debt, lower than nearly every other country in the world. After doing the mathematics behind these numbers, one would find that per every 1 dollar in debt, Hong Kong is profiting over \$350,000 HK dollars. This is nothing short of a staggering number, and definitely shows how strong of an economy Hong Kong has.

## 3. Description of the laws affecting the product (CryptoCard)

The Hong Kong Government actually actively *supports* Bitcoin. Hong Kong's government has said, on numerous occasions<sup>x</sup> that Bitcoin is "Not within the jurisdiction of the Hong Kong



CryptoCard

Monetary Authority.” Norman Chan, the CEO of the Hong Kong Monetary Authority, has said explicitly that the government of Hong Kong cannot treat Bitcoin as a legitimate currency, because it is decentralized. This means that not only is there an absence of laws preventing Bitcoin usage in Hong Kong, but also, the Hong Kong government actively supports the concept of Bitcoin, being anonymous and decentralized.

Technically speaking, there are no *official* laws that condone or go against Bitcoin. Everything is simply word-of-mouth. This actually benefits CryptoCard because CryptoCard keeps all records off the books, and does not like to be closely bordering the law. This allows CryptoCard to perform with full anonymity, and is safer for the users of CryptoCard.

## ***B. Trade Area and Cultural Analysis***

### **1. Geographic and Demographic Advantages and Disadvantages of Hong Kong's Culture**

The people of Hong Kong want nothing more than freedom, and lack of a heavily restrictive government<sup>xi</sup>. This is primarily due to the underlying reasons that Hong Kong was founded, as a refugee site for Chinese exiles<sup>xii</sup>. The majority of Hong Kong natives, especially those with authority in the government, want nothing more than total freedom. Hong Kong is 100% independently ruled, despite the fact that it is legally owned by China. China has absolutely no way of controlling Hong Kong's domestic fiscal operations, which is perfect for CryptoCard's needs.



CryptoCard

## 2. Market Segment Analysis of CryptoCard

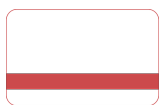
The market that CryptoCard is primarily interested in is the credit card industry. This is a *massive* industry, with \$1 trillion in revenues per year<sup>xiii</sup>. This is more than 6% of the entire United States' economy<sup>xiv</sup>! Not only is there quite a bit of room for new business in such a massive economy, but also there is plenty of room for a niche market that CryptoCard aims to fill.

The market segment in which CryptoCard would like to be in is people who want anonymous and convenient debit cards. This is currently a niche market. There are not any major “superpowers” like there are in the debit card industry (e.g. VISA). This will allow CryptoCard to fill that hole in the payment processing market, and become the leading product in that segment of the market.

The primary competitor in this market segment is BitPlastic.com<sup>xv</sup>. Although its product is similar to CryptoCard, it is not as functional, and does not have many of the benefits that are included with CryptoCard. With Bitplastic.com, the user is responsible for banking. This means that they have the complication and burden of having to find an anonymous bank, regularly contact the bank, and are losing all anonymity. Bitplastic.com also is not compatible with VISA (CryptoCard is), and it has too many complicated fees<sup>xvi</sup>.

## 3. Analysis of Potential Business Location (Hong Kong)

The two primary needs/desires of CryptoCard are anonymity, and ease of use. As previously addressed, Hong Kong has extremely relaxed privacy laws, in the sense that the sole



CryptoCard

purpose of Hong Kong being founded was to provide freedom from the dictatorship of China.

This means that Hong Kong's legal and economic environments are nearly perfect for CryptoCard. There is seldom a country that is successful, like Hong Kong, yet also stable.

The other element of Hong Kong that supports the idea of CryptoCard is, again, that it's government respects the people's privacy enough that anonymous bank accounts are legally allowed to exist. This simplifies virtually every element of CryptoCard. Not only will the customers of CryptoCard not have to worry about registering for a bank account, but also CryptoCard does not have to worry about paying high income tax, like in the United States<sup>xvii</sup>. In fact, Hong Kong's tax is less than 10%, according to the source listed previously. This greatly impacts CryptoCard as a company, and also the customers of CryptoCard, who will not even have to worry about CryptoCard.

## IV. Planned Operation of The Proposed Product

### (CryptoCard)

#### A. Proposed Type of Company / Organization

Of the few types of businesses available in Hong Kong, CryptoCard would propose to operate as a *limited company*<sup>xviii</sup>. A *limited company* is similar to an LLC in the United States. This would allow for CryptoCard to be a private company, and sell stock, if desired. To register as a limited company, CryptoCard would need to register with the Hong Kong government under the



CryptoCard

Companies Ordinance<sup>xix</sup>. In order to register as this type of business, CryptoCard would need to have a minimum of two people officially in the company, both managers. The liability on CryptoCard would be very limited. It would only hold liability if stock prices change<sup>18</sup>.

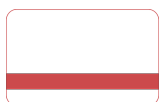
Every legal agreement within CryptoCard is going to be “set in stone”, or in other words, very difficult to change, once initially established. Also, in terms of stability, limited companies in Hong Kong cannot simply be terminated<sup>17</sup>. In order to dissolve a company, both original owners must agree that is the correct thing to do. If an agreement ceases to exist, or an agreement cannot be reached, it must be “proved by the court that it is just and equitable to [terminate the business]”<sup>16</sup>.

There are three different types of limited companies in Hong Kong<sup>xx</sup>. Among these are: *Private Company Limited by Shares*, *Public Company Limited by Shares*, and *Company Limited by Guarantee*. CryptoCard would be a Private Company Limited by Shares. This allows CryptoCard the right to not sell shares of the company publicly, and be protected, from a liability standpoint, from the Hong Kong government. In essence, a limited company is much like what an LLC is like in the United States.

## ***B. Proposed Product (CryptoCard)***

### ***1. Details of The Product (CryptoCard)***

CryptoCard functions nearly like regular debit cards. This is primarily because it will provide not only a familiar platform for the user, but also, it will be able to be used at nearly every retailer worldwide, so long as they accept debit cards. It will be registered with a large,



CryptoCard



already existing debit card provider (e.g. VISA, MasterCard, American Express, etc). Linking it to a larger provider would allow CryptoCard to also utilize Near Field Communications (NFC) technology (i.e. services like Google Wallet®, Apple Pay®). On average, Visa® collects approximately 1% of each transaction that uses their system<sup>xxi</sup>, meaning CryptoCard gets 2% of every transaction as profit.

NFC technology is principally a combination of hardware and software that replaces traditional, printed debit cards with 100% digital cards. This allows for the second goal of CryptoCard, anonymity, to occur naturally. By using a digital wallet via NFC, CryptoCard does not need to collect any unnecessary information from the user that would otherwise be necessary, had it been a regular, plastic debit card (address, name, etc.). Since NFC technology and digital wallets *are limited* to users with advanced electronics, customers will still have the option to order a traditional, plastic debit card.

Because one of the primary goals of CryptoCard is ease of use, the initial setup of CryptoCard is extremely simple:

1. Order a CryptoCard from [www.cryptocard.com](http://www.cryptocard.com)

Only minimal information is required (name/alias, country of residence, address, email address). To preserve anonymity even further, the user has the option to create an anonymous email address as they sign up. There are no shipping/handling costs, because CryptoCard will simply take a 3%



CryptoCard

fee<sup>3</sup> from all purchases. This simplifies the experience for the user, and makes everything easier on both sides of the business.

## 2. Use the card immediately

The user will be emailed a Bitcoin address to deposit money to upon registration, so CryptoCard can be used as soon as it arrives. No verification is required, because there is no sensitive information tied to the card. Initially, there is no money on the card until the user sends Bitcoin to their specific address, which was received in the email. This means that even if the user's CryptoCard is compromised before he/she receives it, it is worthless.

By using this method, the user experience contains minimal stress, and is extremely easy to use. On top of this, the backend of CryptoCard is secure, and wholly anonymous. Users of CryptoCard are still entitled to pay their country's typical sales tax, and when applicable, income tax. CryptoCard as a company is not liable for any tax-related, or otherwise legal related problems that are the result of how the user chooses to use CryptoCard.

After receiving the card, and setting up an account, the user can manage their account via the Internet. When managing the account, the user can choose which fiat currency to store

---

<sup>3</sup> Typically, in the Bitcoin economy, fees range between 1.5% and 3%, so CryptoCard is on the lower end in terms of fees.



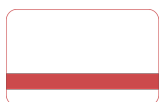
the balance on, choose the cryptocurrency to deposit, view monthly statements, and view numerous utility options.

Choosing a fiat currency to store the account balance in is a very significant feature. In essence, this allows the user to convert between different official currencies instantly, and from the comfort of their home computer. If a user is storing their entire balance in Euros, and they are predicting that the Euro is going to crash, they can instantly convert their savings into another currency (e.g. Pound, USD). Another major benefit of this feature is traveling. If a user who lives in France is planning a trip to the United States, he/she can allot whatever amount of her savings to convert into USD. This allows the user to not only budget themselves when vacationing, but also, it provides one of the most simple methods of international currency conversion.

Cryptocurrency selection is also very important, when storing money long term. Cryptocurrencies can be very problematic, because their exchange rates fluctuate tremendously on a regular basis<sup>4</sup>. As a result of the severe fluctuation, many users prefer to choose a more stable cryptocurrency. Nearly every mainstream cryptocurrency (e.g. Bitcoin & Dogecoin) have the fluctuation problems. Many of the smaller, less widely used cryptocurrencies, however, fluctuate much less (e.g. Bitmark, Litecoin, Quarkcoin, etc). CryptoCard is designed in such a way that any major cryptocurrencies can be applied and deposited to one's CryptoCard account. This

---

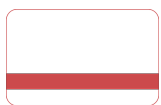
<sup>4</sup> More information about the fluctuation of cryptocurrency is available in the "Problems With Using Bitcoin" section of this report.



allows for the user to store monetary value in the form of cryptocurrency, in a stable way, and then deposit this money to CryptoCard.

By default, monthly statements of CryptoCard are erased 1 month after they are displayed. For the sake of record keeping, the user can choose the option to have their statements automatically emailed to them immediately before they are destroyed, or they can manually save them in PDF format. This removes all liability from the side of CryptoCard, preserves anonymity, and allows the user to keep records that they wish to keep.

Finally, the user can manage a variety of utility settings from the web control panel. They can request a replacement CryptoCard, in the event that the card is lost or stolen. This will freeze all funds until 1) the new card is received by the user via mail, and 2) the user calls CryptoCard to confirm the new card number. CryptoCard will not store the phone numbers that were used to activate the cards, to preserve anonymity. The user can also manage the previously discussed bank statement settings. Since there are no physical locations for CryptoCard to operate (no physical offices or banks), the user can modify all of the typical “in-person-only or in-bank-only” account settings from online. The changes will not be active for 24 hours, to prevent fraud, and an email will be sent to the user each time a change in the account is made. This way, if a hacker gains the login credentials to a CryptoCard customer, the hacker cannot immediately do anything, and the user will be notified of the changes, and if necessary, change the login/password on their account.



CryptoCard

## 2. How CryptoCard Will Be Transported from Hong Kong To International Customers

Since CryptoCard is going to be an international company, it must be distributed in a very effective manner. The platform that CryptoCard will be using primarily is the existing debit/credit card platform, coupled with the existing Bitcoin network platform. This allows for physical distribution via postal systems, and digital distribution everywhere, as long as an Internet connection is present.

According to USA Today<sup>xxii</sup>, all of the major credit cards work internationally. This allows for not only the opportunity to purchase anything worldwide with CryptoCard, but also, it simplifies the user experience. It simplifies the user experience by allowing only 1 physical card that will work anywhere. Rather than have to order a new CryptoCard every time the user travels internationally, the user can use their existing CryptoCard, wherever they are, and the currency will be converted to Bitcoin.

Another tremendous advantage in incorporating a cryptocurrency with CryptoCard is that CryptoCard will work in any country, so long as the user in that country can access the Internet. This will make the user experience very simple, and minimize stress. CryptoCard will be extremely easy to use, and at the same time, it will be very secure.

## 3. Documentation

Since CryptoCard functions like any other regular debit card, only minimal documentation



CryptoCard

will be provided, and it will be publicly accessible from the CryptoCard.cc website. It will be available in the 10 most common languages<sup>xxiii</sup> (Chinese, Spanish, English, Hindi, Arabic, Portuguese, Bengali, Russian, Japanese, and Javanese). 44.04% of the population of the world speaks these languages<sup>xxiv</sup>. If a market opens up for CryptoCard that is significant and does not speak these languages, CryptoCard will add that language without hesitation. Since nearly every country that supports debit cards requires the Internet, CryptoCard's documentation will be available to nearly every user. If a single user needs documentation in their native language, they may translate it via a automatic translation website. Since ease of use is the keystone to CryptoCard's success, documentation will be minimal and the user interface will be extremely easy to use, even without documentation.

## *C. Proposed Strategies*

### *1. Proposed Pricing Policies*

CryptoCard's number one goal is ease of use (simplicity), and anonymity. When it comes to pricing, simplicity takes precedence over anonymity, because anonymity is not a factor in determining how much something will cost. To match these product goals, CryptoCard has a flat 3% fee on all purchases (online and in-store), with three exceptions, as listed below:

1. On ATM withdraws, CryptoCard takes a separate fee.
  - a. If the ATM withdraws the *same* currency in the user's official fiat currency (USD, Euro), CryptoCard replaces the standard 3% fee with a 5%. The additional ATM fee exists solely to pay for any fees that the ATM



CryptoCard

provider/intermediary requires. These fees are a business expense for CryptoCard, that the user will pay for via the ATM induced fee.

- b. If the ATM withdraws a *different* currency than one of the currencies in the user's account at the time of the withdraw, there is a 10% fee. This fee can be avoided by converting a designated amount of fiat currency from the account via the web control panel, prior to the ATM withdraws. In essence, if the user converts the currency beforehand, they would only need to pay a 5% fee, because the withdrawn currency already exists within their account. The 10% fee is for CryptoCard to convert money last minute to a new currency as the money is withdrawn.
2. On any transactions that are in a different currency than what the user has in their CryptoCard balance, CryptoCard takes a separate fee.
  - a. CryptoCard will convert the amount of the transaction into the new currency, based on The World Bank's exchange rates<sup>xxv</sup>. CryptoCard will then take a 7% fee (replacing the default 3% fee) off of the end amount in the new currency.
3. If the customer ordered a CryptoCard during the promotion (outlined below), a temporary fee will be applied until the shipping costs and production costs are paid off.
  - a. To compensate the cost of production and the cost of shipping



CryptoCard

CryptoCard, the customer will have a 5% fee in place until the \$1.11<sup>xxvi</sup> USD initial shipping/production costs are paid off. This means after spending roughly \$20 USD, the customer will resume the normal fee of 2%, and all of CryptoCard's production and distribution charges will be paid off. Typically, the average debit card user spends \$120/week on a debit card<sup>xxvii</sup>, so the fee would be paid off on average in approximately 1 usage day.

## 2. Proposed Promotional Program

In order to jump-start CryptoCard, and make it profitable long term, it needs to have lots of customers. When this is necessary, promotional programs are often the best option. To get *potential* customers *interested* in CryptoCard, there will be a promotional program that CryptoCard runs.

All customers that order CryptoCard will get their card mailed to them, free of charge. During promotion, customers will not have to pay any shipping fee. To compensate for this, the user will pay a slightly higher fee than the typical 2%, as outlined in the "Proposed Pricing/Fee Policies". This will allow for customer's to be not only initially very satisfied with CryptoCard as a company, but also, it drastically simplifies the sign up process, because customers are not required to use an existing payment method to obtain CryptoCard.

If this promotion did not exist, the customer would need to provide an existing method of payment initially to cover the costs of production and distribution. Besides the fact that this



CryptoCard



makes the user experience much more complicated than it needs to be, the anonymity of the customers is not preserved. One of the primary goals of CryptoCard is preserving anonymity of the customer. This is a goal because traditional debit cards have absolutely no elements of anonymity. If someone makes a debit card transaction, the debit card issuer knows *exactly* who holds the card and therefor is responsible for the transaction. This means that if someone purchases CryptoCard with an existing debit card, the card issuer knows who CryptoCard's customer is. All anonymity is shattered when this occurs. This is precisely why CryptoCard requires no initial payment. It preserves anonymity, and simplifies the user experience dramatically.

## V. Planned Financing

### 1. Projected Income And Expenses

CryptoCard's projected income for the first year is critical to its long-term success. This is based on a variety of factors. Taken first into account, are the expenses. The variable expenses are primarily composed of the production cost per debit card. This is a total of \$0.47 per card. On top of this, shipping costs are, on average, approximately \$0.64. This information comes from the creditcard.com average cost of debit/credit card productions<sup>xxviii</sup>. This adds to only \$1.11 in total initial expenses per customer, on a yearly basis. According to The Guardian's estimate that the average debit card user spends about \$120/week<sup>xxix</sup>. With promotion, this fee will be paid off



on average in less than 24 hours. Outside of promotion, this fee will be paid off immediately—as the user pays for this fee when they initially order CryptoCard. Fortunately, CryptoCard has no enormous startup fees. Corporate fixed expenses really only include website hosting, business registration, and paying employees.

Domain purchasing will be done through Google Domains<sup>®</sup>. This costs \$12 per year<sup>xxx</sup>. CryptoCard would prefer to register separately each year, to keep expenses under control. The domain will cost \$12 per year. The actual hosting of the website will be done through Github<sup>®</sup>, which is free to use, and supports commercial websites and custom domains<sup>xxxi</sup>.

The next expense is business registration in Hong Kong and the United States because these will be the two primary consumer markets for CryptoCard. In Utah, which will be where the business is registered, the creation of an LLC costs \$50 each year the business is in operation<sup>xxxii</sup>. In Hong Kong, it costs \$81 per year to register a Limited Company in Hong Kong<sup>xxxiii</sup>. This is a total of \$131/year. On top of this, Hong Kong has a corporate tax rate of 16.5%<sup>xxxiv</sup>, which is deducted from the net income.

Traditionally, developing the infrastructure for the app to run would be extremely costly. This would be done through Espresso App Development<sup>xxxv</sup> (EAD). A representative from EAD has given CryptoCard a quote of \$247,536 to develop the platform for CryptoCard. Included in this quote is server-side code that will run each transaction (primarily PHP and Python<sup>®</sup>), and also the front-end programming (e.g. website, mobile app, etc.). This price also includes professional security penetration testing by EAD's security team. By approaching development through this scope, CryptoCard is able to cover security and initial developmental expenses via a fixed



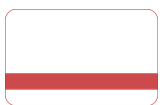
number. After the initial security check, EAD charges \$50,000 per year to test network security, which will be done on a yearly basis.

Finally, the minimum wage/hour in Hong Kong is approximately \$30 Hong Kong Dollars/hour. This translates to approximately \$3.87/hour in United States Dollars<sup>xxxvi</sup>. Initially, CryptoCard will have 3 employees: Chief Technology Officer (CTO, also has role of Chief Executive Officer), Chief Financial Officer (CFO), and Chief Marketing Officer (CMO, also in charge of Customer Relations-e.g. support). The ratio of pay from CTO : CFO : CMO is 20:15:15, sharing 50% of the profits after expenses have been taken out. The other 50% of the profits will be going to the CryptoCard bank account for use on unexpected expenses and a pool of marketing funds. If CryptoCard reaches more than 10,000 users, each Chief Officer may hire people to work under them, and manage their own people, however, the new employees salary is deducted from their respective Chief Officer's salary.

The long-term profitability of CryptoCard can be illustrated by the below equation:

$$Net\ Income = (\$126.09c - \$50,144.11y - \$247,536) * 0.835$$

In This equation,  $c$  is equal to the total number of active customers in a given year,  $y$  is equal to the amount of years being taken into account, and any yearly expenses. The "0.835" is the amount that CryptoCard keeps after taxes, which are 16.5%. In order to sustain profitability at this rate, CryptoCard must have at least 2,090 yearly customers at a given moment for a period of 1 year. Although CryptoCard expects many more customers, this is the minimum required to pay off the initial cost of app development, security, and any other yearly fees.



### A. Projected Income Statements For The First Year's Operation

Up to "" Customers	Number of Employees	Gross Income
100	1.00	\$12,400.00
1000	3.00	\$124,000.00
10000	4+	\$1,240,000.00
100000	4+	\$12,400,000.00

### B. Proposed Balance Sheet For The End of The Year

Gross Income	User Yearly Fees and fixed expenses	Total Net Income
\$12,400.00	\$50,146.00	-\$37,746.00
\$124,000.00	\$50,344.00	\$73,656.00
\$1,240,000.00	\$52,324.00	\$1,187,676.00
\$12,400,000.00	\$72,124.00	\$12,327,876.00

### Distribution of Net Profit:

Total Net Income	50% Net Income to pay for salaries	Salary For CTO/CEO	Leftover to put in bank account per year
-\$37,746	0	0	0
\$73,656.00	\$36,828.00	\$14,731.20	\$36,828.00
\$1,187,676.00	\$593,838.00	\$237,535.20	\$593,838.00
\$12,327,876.00	\$6,163,938.00	\$2,465,575.20	\$6,163,938.00

### C. Planned Growth of CryptoCard

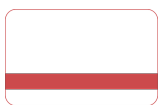
These numbers are based on a 3% standard fee from CryptoCard, and take into account all of the expenses listed above. This chart assumes that the initial cost of \$247,536 has already been paid off. Based on these graphs, and these numbers, CryptoCard must maintain a base,



CryptoCard

after initial expenses are paid off, of preferably at least 1,000 customers. This allows CryptoCard to have money to fall back on in the case of an emergency or otherwise unexpected expense.

Once fixed, initial expenses are paid off, CryptoCard will have only minimal recurring expenses, yearly. These expenses depend almost entirely on the number of customers that are enrolled in CryptoCard for that year. CryptoCard's business model is built in a way where expenses can be paid off, with nearly any amount of customers. This prevents CryptoCard from entering severe debt, and it keeps CryptoCard's balance sheet positive, no matter the size of the business.

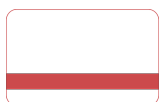


CryptoCard

---

## VI. Bibliography / Sources Used

- <sup>i</sup> <https://www.privacyworld.com/panama-hkg.html>
- <sup>ii</sup> [https://www.offshore-manual.com/hongkong\\_acc.html](https://www.offshore-manual.com/hongkong_acc.html)
- <sup>iii</sup> Peer-to-peer: A network (typically of computers) that is not hosted by a central authority, but hosted on every single computer that is part of the network, collectively. This makes it nearly impossible to take down.
- <sup>iv</sup> [bankingmyway.com/credit-center/3-ways-cut-wire-transfer-costs](http://bankingmyway.com/credit-center/3-ways-cut-wire-transfer-costs)
- <sup>v</sup> <https://blockchain.info/charts/hash-rate>
- <sup>vi</sup> <http://www.heritage.org/index/country/hongkong>
- <sup>vii</sup> <http://www.scmp.com/business/economy/article/1604918/hong-kong-dollar-stable-despite-occupy-central-unrest>
- <sup>viii</sup> <http://www.heritage.org/index/country/hongkong> “Background” section
- <sup>ix</sup> <http://www.hkma.gov.hk/eng/market-data-and-statistics/economic-and-financial-data-for-hong-kong.shtml>
- <sup>x</sup> <http://news.takungpao.com/paper/q/2013/1116/2042791.html>
- <sup>xi</sup> <https://freehongkong.wordpress.com/>
- <sup>xii</sup> [http://www.csudh.edu/global\\_options/375Students-Sp96/HongKong/BriefHist.html](http://www.csudh.edu/global_options/375Students-Sp96/HongKong/BriefHist.html)
- <sup>xiii</sup> <http://mashable.com/2012/11/15/mobile-payments-top-1-trillion/>
- <sup>xiv</sup> <http://www.gminsidenews.com/forums/f38/final-estimates-federal-bailouts-2009-a-191073/index4.html>
- <sup>xv</sup> [Bitplastic.com](http://Bitplastic.com)
- <sup>xvi</sup> <https://bitplastic.com/bitcoin-debit-card>
- <sup>xvii</sup> <http://www.theglobeandmail.com/report-on-business/economy/canada-competes/hong-kongs-simple-low-taxes-dont-we-all-want-it/article13393877/>
- <sup>xviii</sup> <http://www.investhk.gov.hk/setting-up-your-business/company-name-and-structure.html>
- <sup>xix</sup> [http://www.accountpro.net/en/service\\_setupco.htm](http://www.accountpro.net/en/service_setupco.htm)
- <sup>xx</sup> <http://www.cr.gov.hk/en/publications/docs/4-e.pdf>
- <sup>xxi</sup> <http://www.nytimes.com/2010/01/05/your-money/credit-and-debit-cards/05visa.html?pagewanted=all>
- <sup>xxii</sup> [http://usatoday30.usatoday.com/travel/deals/inside/2009-05-21-best-overseas-credit-card\\_N.htm](http://usatoday30.usatoday.com/travel/deals/inside/2009-05-21-best-overseas-credit-card_N.htm)
- <sup>xxiii</sup> <http://www.infoplease.com/ipa/A0775272.html>
- <sup>xxiv</sup> Based on world population of 7.32 billion <http://www.worldometers.info/world-population/>
- <sup>xxv</sup> <http://data.worldbank.org/indicator/PA.NUS.FCRF>



CryptoCard

---

<sup>xxvi</sup> <http://www.creditcards.com/credit-card-news/cost-getting-credit-card-in-your-pocket-1276.php>

<sup>xxvii</sup> <http://www.theguardian.com/money/2014/jun/04/credit-debit-card-spending-funerals>

<sup>xxviii</sup> <http://www.creditcards.com/credit-card-news/cost-getting-credit-card-in-your-pocket-1276.php>

<sup>xxix</sup> <http://www.theguardian.com/money/2014/jun/04/credit-debit-card-spending-funerals>

<sup>xxx</sup> <https://support.google.com/domains/answer/6010092?hl=en>

<sup>xxxi</sup> <https://pages.github.com/>

<sup>xxxii</sup> <http://www.utah.gov/business/>

<sup>xxxiii</sup> [http://www.ird.gov.hk/eng/tax/bre\\_lcc.htm](http://www.ird.gov.hk/eng/tax/bre_lcc.htm)

<sup>xxxiv</sup> [http://www.pwchk.com/home/eng/tax\\_hk\\_corptax.html](http://www.pwchk.com/home/eng/tax_hk_corptax.html)

<sup>xxxv</sup> [www.espressoappdev.com](http://www.espressoappdev.com)

<sup>xxxvi</sup> Based on the February 11 rate from Google Finance®



CryptoCard